

POSC/CAESAR Reference Data Browser

User Guide

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1 Introduction

This document is the **user-guide** for the distributed version of the POSC/CAESAR Reference Data Browser, which have been made available for display and reporting of class instances of the POSC/CAESAR data model.

This version of the reference data browser, *Snapshot C/D*, is a read-only Microsoft-Access 2.0 version. It does not contain any data-entry or update facilities.

For basic knowledge and understanding of the data in this database, reference is made to the *Snapshot C/D* documentation for further explanations;

- Volume I : Main document
- Volume II : Data model diagrams and entity dictionary
- Volume III : Reference Data Library.

Volume III of the Snapshot C/D documentation is a report from the Reference Data Application.

2 POSC/Caesar Reference Data Browser Menu

Start the Class-library application from **MS-Access**, by opening the file : **REFDATA.MDB**
This will automatically display the **Main Menu**, as indicated in Figure 2-1 below.

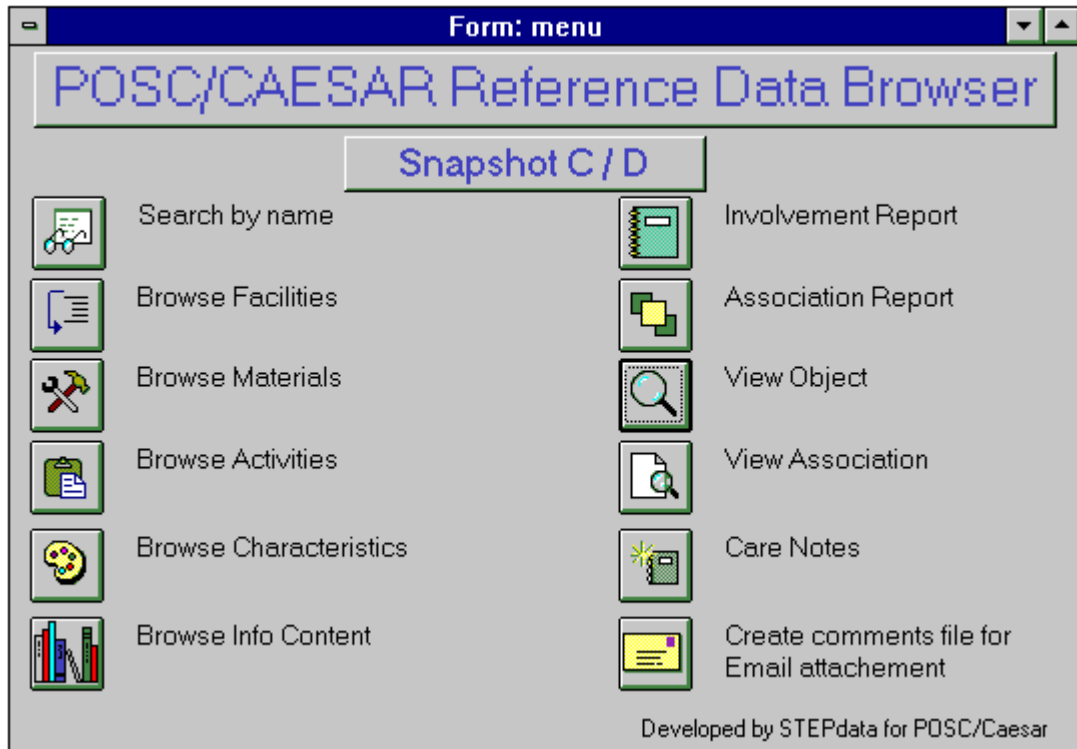


Figure 2-1 POSC/CAESAR Reference data library main menu

Valid options from the **Main-Menu** :

- | | |
|---|--|
| Search by Name | : Search for any type of class |
| Browse Facility | : Browse Facility class structure |
| Browse Material | : Browse Material class structure |
| Browse Activity | : Browse Activity class structure |
| Browse Characteristic | : Browse Characteristic class structure |
| Browse Info Content | : Browse Information Content class structure. |
| Involvement Report | : Report involvement classes. |
| Association Report | : Report any type of class with the corresponding associations |
| View Object | : Display classes with the corresponding definition |
| View Association | : Display classes with associations, e.g. class library structure |
| Care Notes | : Information regarding application. |
| Create comments file to Email Attachment | : Generate an ASCII file containing any comments done by the user. |

These options will be explained in the following sections of chapter 2.

Example:

This chapter 2 of this user manual will guide you through the application using the Material Class 'VALVE' as an example.

a) How to search and display the description and details about a particular class

b) How to display related information to the class 'Valve'

- Normal Properties related to a 'Valve'*
- Normal Parts of a 'Valve'*
- The classification structure of a 'Valve', show sub-classes of 'Valve', e.g. 'Globe valve'*
- Normal connections, e.g. an 'Actuator'*

c) Report all information related to classes, to printer or screen.

2.1 Search by name

The 'Search by name' option, allow the user to search for any type of **class** instances in the *reference data library*. Currently the following type of class have been populated; Facility, Material, Activity, Characteristic, Involvement or Information Content classes.

Enter the search criteria in the 'Search for' field. Wildcards such as '*' and '?' may be used.
Press the [-->] button to start the search.

The search routine does not differ between lowercase and uppercase characters.

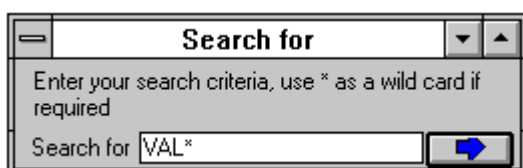
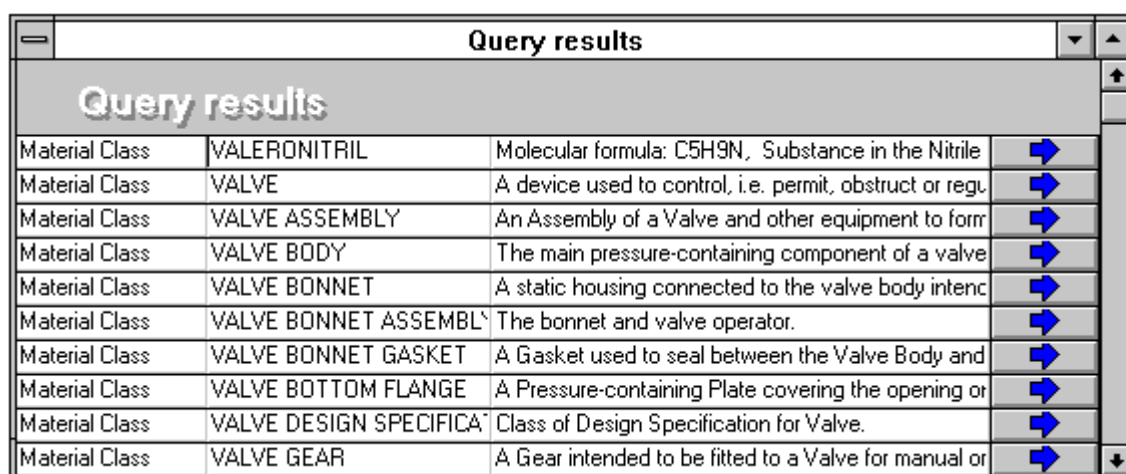


Figure 2-2 Enter Search criteria

The result from the search will be presented in a separate form, Fig.2-3.

Displaying the following information about class instances;

'Type of class', 'Class name', 'Description'.



Material Class	Class name	Description
VALERONITRIL		Molecular formula: C5H9N, Substance in the Nitrile
VALVE		A device used to control, i.e. permit, obstruct or regu.
VALVE ASSEMBLY		An Assembly of a Valve and other equipment to form
VALVE BODY		The main pressure-containing component of a valve
VALVE BONNET		A static housing connected to the valve body intenc
VALVE BONNET ASSEMBL		The bonnet and valve operator.
VALVE BONNET GASKET		A Gasket used to seal between the Valve Body and
VALVE BOTTOM FLANGE		A Pressure-containing Plate covering the opening or
VALVE DESIGN SPECIFICA		Class of Design Specification for Valve.
VALVE GEAR		A Gear intended to be fitted to a Valve for manual or

Figure 2-3 Query result from the search criteria.

Further information related to a particular class may be available. Press the [-->] button related to a particular class instance. A 'pop-up-menu' will be displayed on the screen, see fig 2-4.

The active class name will be displayed on the menu, e.g. 'VALVE' in the example.



Figure 2-4 Pop-up menu

Available options on the menu, following the icons from left to right:

- Classification : Shows the classification structure for current class, super and sub classes.
- Composition : Shows the 'normal composition' for current class
- Connection : Shows the 'normal connection' for current class
- Characteristics : Shows the 'normal characteristics' for current class
- Involvement : Shows the 'involvements' for current class.
- Show all : Shows all direct associations related to current class (inheritance not included)
- Close all : Close all forms
- Comments : Add a comment to a class. Enable the user to generate a report may be sendt to POSC/CAESAR project by email.

Some of these options will be shown below.

2.1.1 Classification.

In this exampl the classification option shows the classification structure for the VALVE. The upper form shows the direct super class of VALVE. The lower form shows the direct sub classes of VALVE.

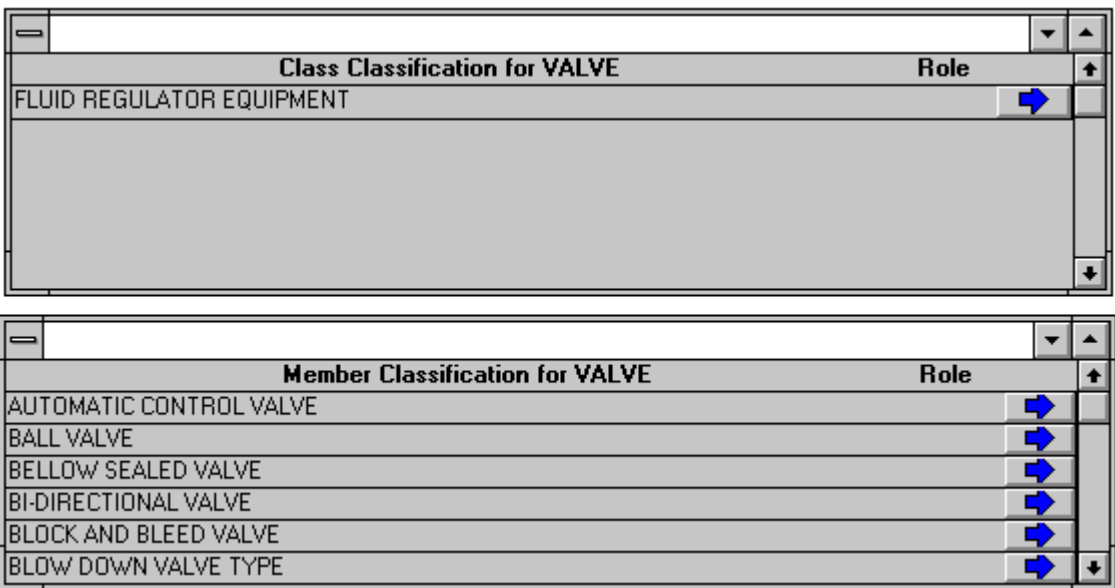


Figure 2-5 Classification structure.

Overview of the classification structure for the material class VALVE.

```

* MATERIAL CLASS
  * EQUIPMENT TYPE
    * FLUID EQUIPMENT
      *FLUID REGULATOR EQUIPMENT
        * VALVE
          *AUTOMATIC CONTROL VALVE
          *BALL VALVE
          * .....
  
```

2.1.2 Characteristics

The 'Characteristics option' will show instances of 'normal characteristics' related to VALVE. It will also show characteristics inherited from super classes. The example below shows that the only one characteristic is related directly to the class VALVE, the other characteristics have been inherited from FLUID EQUIPMENT which is a super class of VALVE (see classification structure above).

Characteristics	Inherited from
END TO END DIMENSION	VALVE
DRY WEIGHT	FLUID EQUIPMENT
MAXIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MINIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MAXIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
MINIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
MAXIMUM DESIGN PRESSURE	FLUID EQUIPMENT

Figure 2-6 Normal characteristics

2.1.3 Comments

This option allow the user to add comments to any classes within the class library.

The comments are stored in a table, which may be exported to a file. The intention with this export file is either to send it to the project by email, or print the file and send it by fax .

The 'Create comments file for Email attachment' option on the main menu is used to generate this file.

Comments

Store for attachment

VALVE Date Created: 10-Jan-97
Date Sent:

This is a test comment for the VALVE class.
To make a new line, press [Ctrl] + [Enter]
Press [Store for attachment] button to save, and close the Form.
This comment may be exported to a file, and sendt to the
POSC/CAESAR project as comment.

Record: 1 of 1

2.2 Browsers

From the main menu 5 browser options are available :

- Browse Facility classes
- Browse Material classes
- Browse Activity classes
- Browse Characteristic classes
- Browse Info Content. classes

All these browsers have the same functionality, and for demonstration we will use the Material Class Browser.

Select *Material Class Browser* from the main menu, which will display the form as shown in fig 2-7 below. The 'pop-up' menu will automatically be displayed.

- ☞ 'click' on the '+' in order to open a sub level (sub classes) of the classification structure.
- ☞ 'click' on the '-' in order to close a sub level of the classification structure.
- ☞ 'double click' on a class in order to set this as the 'active class'. The name of the active record is displayed in the 'pop-up' menu.

In fig 2-7 the user have pressed the '+' of EQUIPMENT TYPE, this will display the sub classes of this class. The '-' sign in front of the EQUIPMENT TYPE indicate that it have been 'opened'.

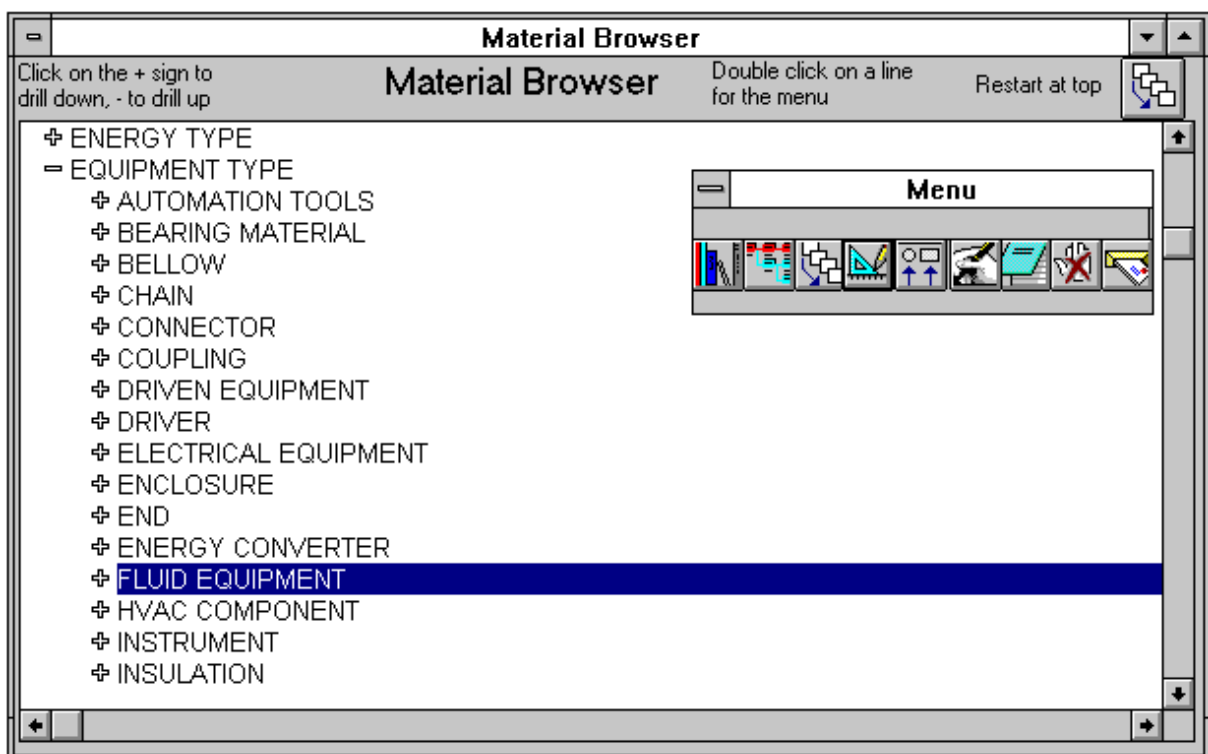


Figure 2-7 The Class browser shows the classification structure.

In the following example we will show how to drill down to the VALVE class.

☞ ‘double-click’ on the ‘VALVE’ line in order to set this record as active. The name of the active record is displayed in the ‘pop-up’ menu.

Select the options from the ‘pop-up’ menu. The options are the same as indicated in chapter 2.1.

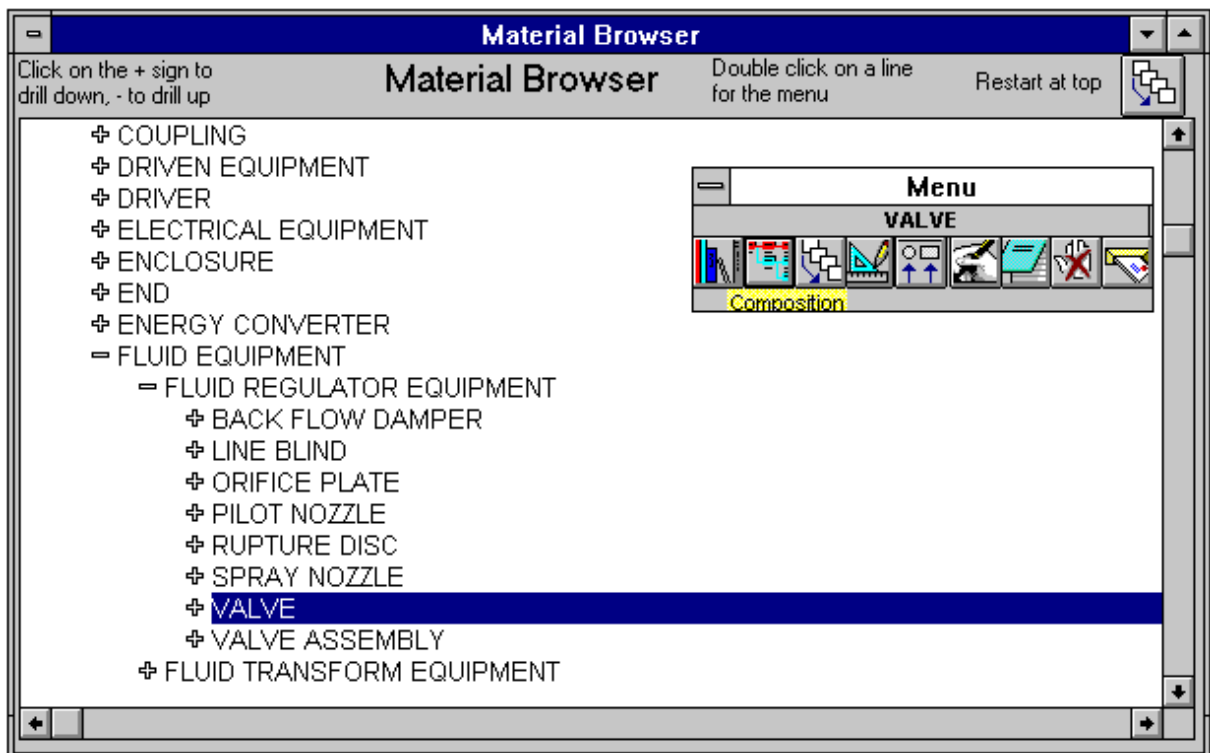


Figure 2-8 Set active class by double click on a line.

2.3 Object

The **Object** form; figure 2-9, is used in order to display main information about **class** instances. The form contains the following information :

- | | |
|----------------------------------|--|
| - Name, | (Name of the class) |
| - Definition, | (Definition of the class) |
| - Remarks, | (Remarks) |
| - Label, | (a short term often used as name of the class by the industry) |
| - Last Modification date, | (Last modified by Posc/Caesar) |
| - User id | (Internal Posc/Caesar user identification) |

How to display a class instance ?

1. Selecting the **Object type** (or type of class) in the [*Object List*].
Example: '**Material class**'
2. Select a class from the [*Object Instance List*]
Use the [*Pattern*] field in order to filter which classes to display.

2.3.1 Select object type

The screenshot shows a software window titled "Object". On the left side, there are four text input fields labeled "Name:", "Definition:", "Remarks:", and "Label:". Below these is a "Last Modified :" field. On the right side, there is a "Pattern:" field with a small "x" icon, and below it, a list box titled "Object List:". The list box contains eight items: "Activity Class", "Characteristic Class", "Complex Object Class", "Facility Class", "Inclusion Class", "Information Content Class", "Involvement Class", and "Material Class". At the bottom of the window, there are two buttons: "New" and "Delete".

Figure 2-9 Select Entity type

2.3.2 Select object instance

- Select the class instance from the *[Object Instance List]*.

You may use the *[Pattern]* field in order to limit the number of classes in the *[Object Instance List]*.

Example:

VA , will display only classes starting with the letters VA with any number of characters.*

VA? , will display only classes starting with the letters VA.

The default value of *[Pattern]* ; '*' list all object instances.

NB! If the *[Pattern]* field is <blank>, no objects will be displayed in the *[Object Instance List]*.

The screenshot shows a software window titled "Object". On the left, there are four input fields: "Name:", "Definition:", "Remarks:", and "Label:". Below the "Label:" field is a "Last Modified :" label. At the bottom of the window are two buttons: "New" and "Delete". On the right side, there is a "Pattern:" field containing an asterisk (*). Below it is the "Object List:" section with a dropdown menu showing "Material Class". Underneath is the "Object Instance List" section, which has a dropdown menu currently displaying a list of valve-related items: "VALVE", "VALVE ASSEMBLY", "VALVE BODY", "VALVE BONNET", "VALVE BONNET ASSEMBLY", "VALVE BONNET GASKET", "VALVE BOTTOM FLANGE", and "VALVE DESIGN SPECIFICATION". The "VALVE" item is highlighted at the top of the list.

Figure 2-10 Select instance of entity to display, e.g. Material class; VALVE

Display object

Figure 2-11 show the Material Class ; 'VALVE' with the corresponding detailed information :

- Name (This name is unique within the Reference Data Library)
- Definition
- Remarks
- Label
- User id (Internal Posc/Caesar user identification)
- Modification date (Last modified by Posc/Caesar)

The screenshot shows a window titled 'Object' with a blue header bar. The window is divided into several sections. On the left, there are labels for 'Name:', 'Definition:', 'Remarks:', and 'Label:'. The 'Name' field contains 'VALVE'. The 'Definition' field contains the text 'A device used to control, i.e. permit, obstruct or regulate a Fluid Stream.' The 'Remarks' field is empty. The 'Label' field is empty. Below these fields, there is a 'Last Modified' field showing 'u82236 1996-04-30 13:20'. At the bottom of the left section are 'New' and 'Delete' buttons. On the right side, there is a 'Pattern:' field with a small icon. Below it is an 'Object List:' section with a dropdown menu showing 'Material Class'. Below that is an 'Object Instance List' section with a dropdown menu showing 'VALVE'. An 'Inspect' button is located below the 'Object Instance List' dropdown.

Figure 2-11 Display object

The [New] and [Delete] buttons are not available in the read-only version.

The [Inspect] button will display the report as indicated in figure 2-16, which shows all **associations** current object , 'VALVE', is involved in.

2.4 Associations

The **Association form** in figure 2-12, is used to display **association** instances of the data model. Ref. the data model in fig. 3-1 in chapter 3.

How to Display an Object with the corresponding Association.

1. Select an **Association** type, e.g. '*Material Class Classification*' in order to view the classification structure.
2. Select an **Object Type**, e.g. '*Material Class*'.
3. Select an **Object/Class instance**, e.g. '*VALVE*'.

2.4.1 Select an Association type

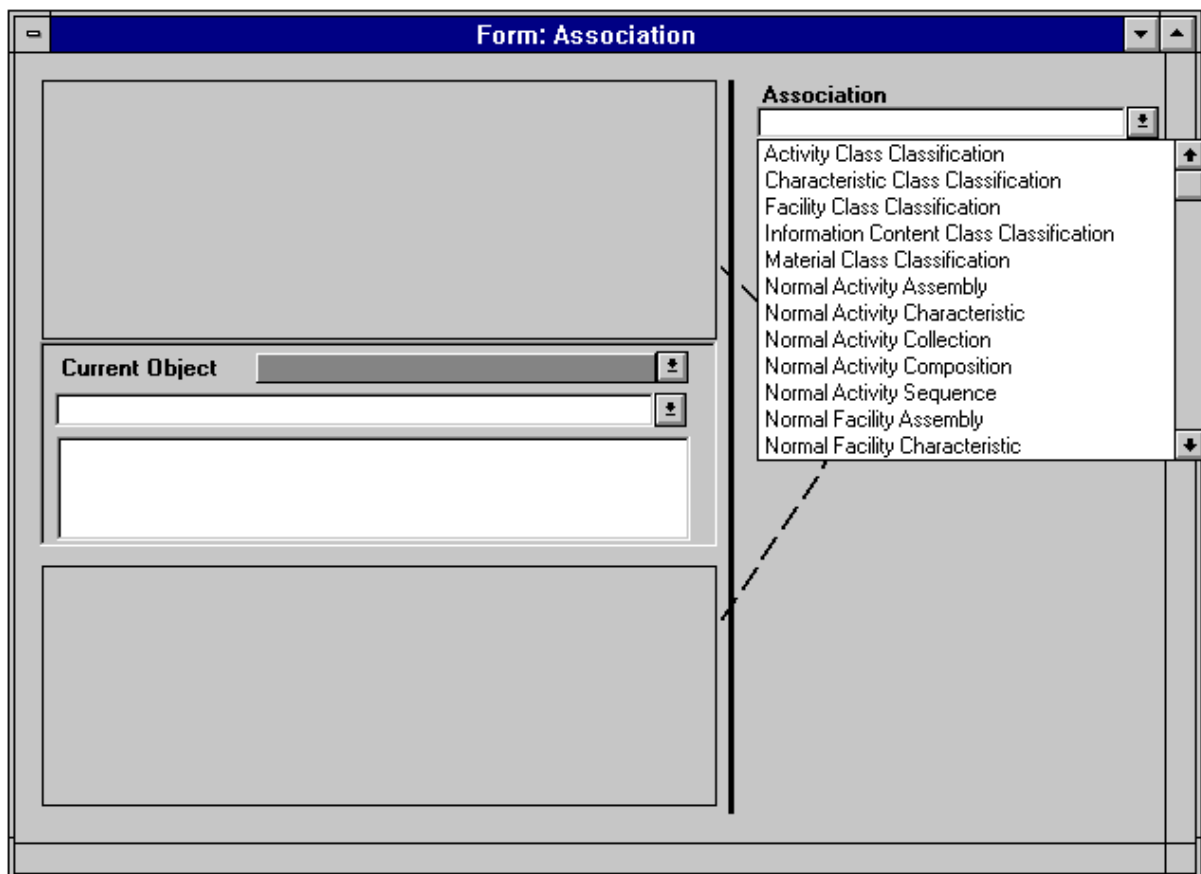


Figure 2-12 Select association type

The most relevant Associations related to **Material classes** are:

<u>Association name in data-model</u>	<u>Description</u>
Material class classification	Classification structure
Normal material characteristics	Characteristics (properties)
Normal material composition	Parts /Assembly
Normal material connection	Connections

2.4.2 Select Object type.

In order to view an object you have to select an 'object type' from the data-model. In the data model there are four valid choices related to the 'Material Class Classification' association :

- 'Thing'
- 'Object'
- 'Class Object',
- 'Material Class'.

In the data model terminology the 'Material Class' is a sub-type of 'Class Objects' which is a sub-type of 'Object' which again is a sub type of 'Thing'.

According to the data model 'Thing', 'Object' and 'Class Object' are 'abstract entities', and does not contain any instances. Only valid option in this example is to select the '**Material Class**'

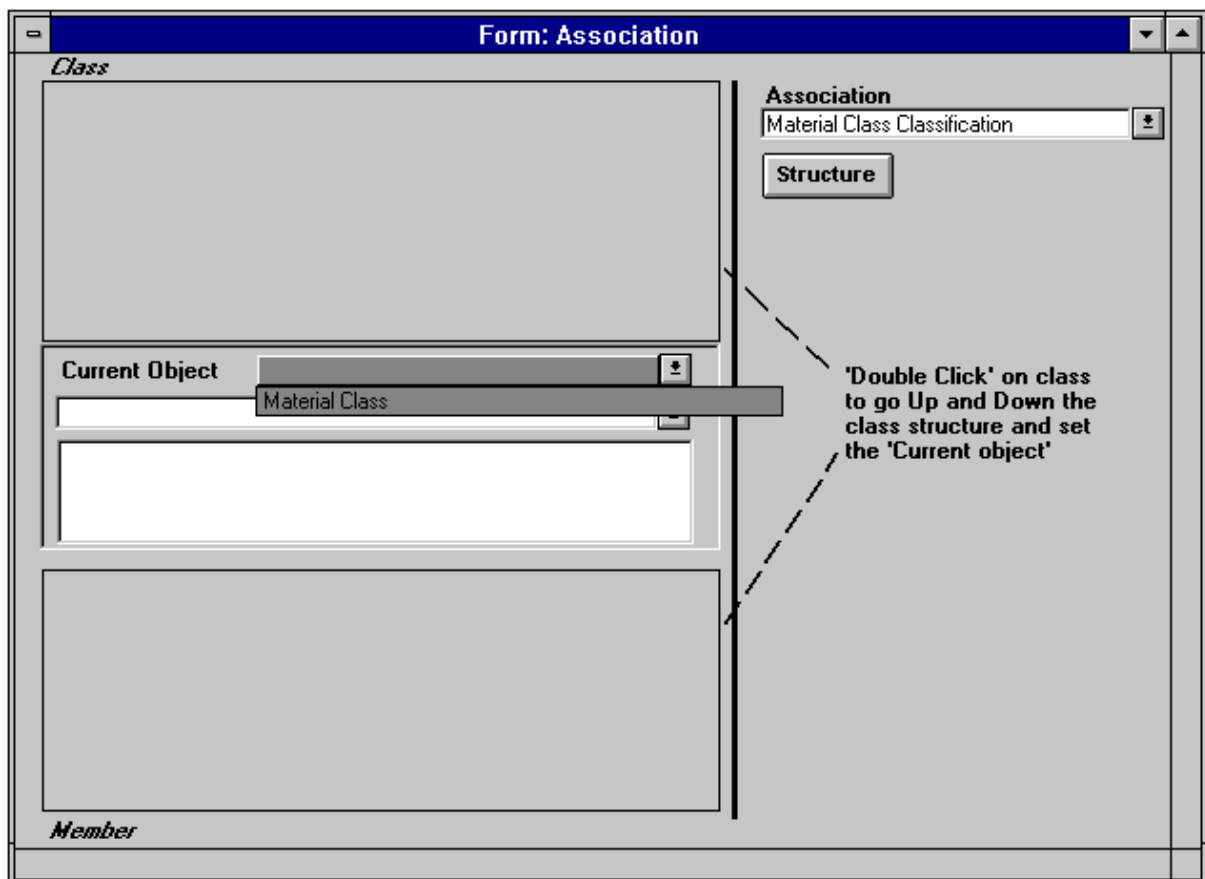


Figure 2-13 Select object type

2.4.3 Select Object/class instance.

Select the Material Class : 'VALVE'.

Start typing 'VA' in the field, and the system will start listing classes starting with the letters 'VA'.

The screenshot shows a software window titled "Form: Association". It is divided into several sections. At the top left, there is a "Class" section with a large empty box. Below it is the "Current Object" section, which has a dropdown menu set to "Material Class". Below the dropdown is a list of material classes: "VACUUM PUMP", "VACUUM PUMP", "VACUUM VESSEL", "VALERONITRIL", "VALVE", "VALVE ASSEMBLY", "VALVE BODY", "VALVE BONNET", and "VALVE BONNET ASSEMBLY". The first "VACUUM PUMP" entry is highlighted. To the right of the list are up and down arrow buttons. To the right of the "Current Object" section is an "Association" section with a dropdown menu set to "Material Class Classification" and a "Structure" button. A dashed line points from the "Structure" button to the list of classes, with a text box that says: "Double Click' on class to go Up and Down the class structure and set the 'Current object'". At the bottom left, there is a "Member" section with a large empty box.



Figure 2-14 Select object instance

Display the object and the corresponding association.

The screenshot shows a software window titled "Form: Association". It is divided into several sections. At the top left, under the heading "Class", is a large text area containing "FLUID REGULATOR EQUIPMENT". Below this is a section for the "Current Object", which includes a dropdown menu set to "Material Class", a text field containing "VALVE", and a description: "A device used to control, i.e. permit, obstruct or regulate a Fluid Stream." Below the current object is a list of classes: "AUTOMATIC CONTROL VALVE", "BALL VALVE", "BELLOW SEALED VALVE", "BI-DIRECTIONAL VALVE", "BLOCK AND BLEED VALVE", "BLOW DOWN VALVE TYPE", "BUTTERFLY VALVE", "CHECK VALVE", and "CHOKE VALVE". To the right of this list are up and down arrow buttons. On the far right, under the heading "Association", is a dropdown menu set to "Material Class Classification" and a button labeled "Structure". A dashed line with an arrow points from the text "'Double Click' on class to go Up and Down the class structure and set the 'Current object'" to the up and down arrow buttons next to the class list.

Figure 2-15 Display object with corresponding associations.

Traversal of the hierarchy :

You may  'double-click' in any of the classes above or under the [Current Object] in order to traverse the class hierarchy up or down. E.g.  'double-click' on the BALL VALVE class, will set the BALL VALVE as the [Current Object] and set VALVE as the 'super-class' and list sub-classes below, if applicable.

The [Structure] button will start a report which show the whole classification structure from 'Current object'. All super classes and sub classes will be displayed, as indicated in fig. 2-16.

2.4.4 Structure Report

Press the [**Structure**] button in the 'Association' form to display the report below.

This option is only available for the 'Classification' associations.

- Facility Class Classification
- Material Class Classification
- Activity Class Classification
- etc..

in order to display the classification structure of the class library.

The report will display all super- and subclasses of 'current class' ; VALVE.

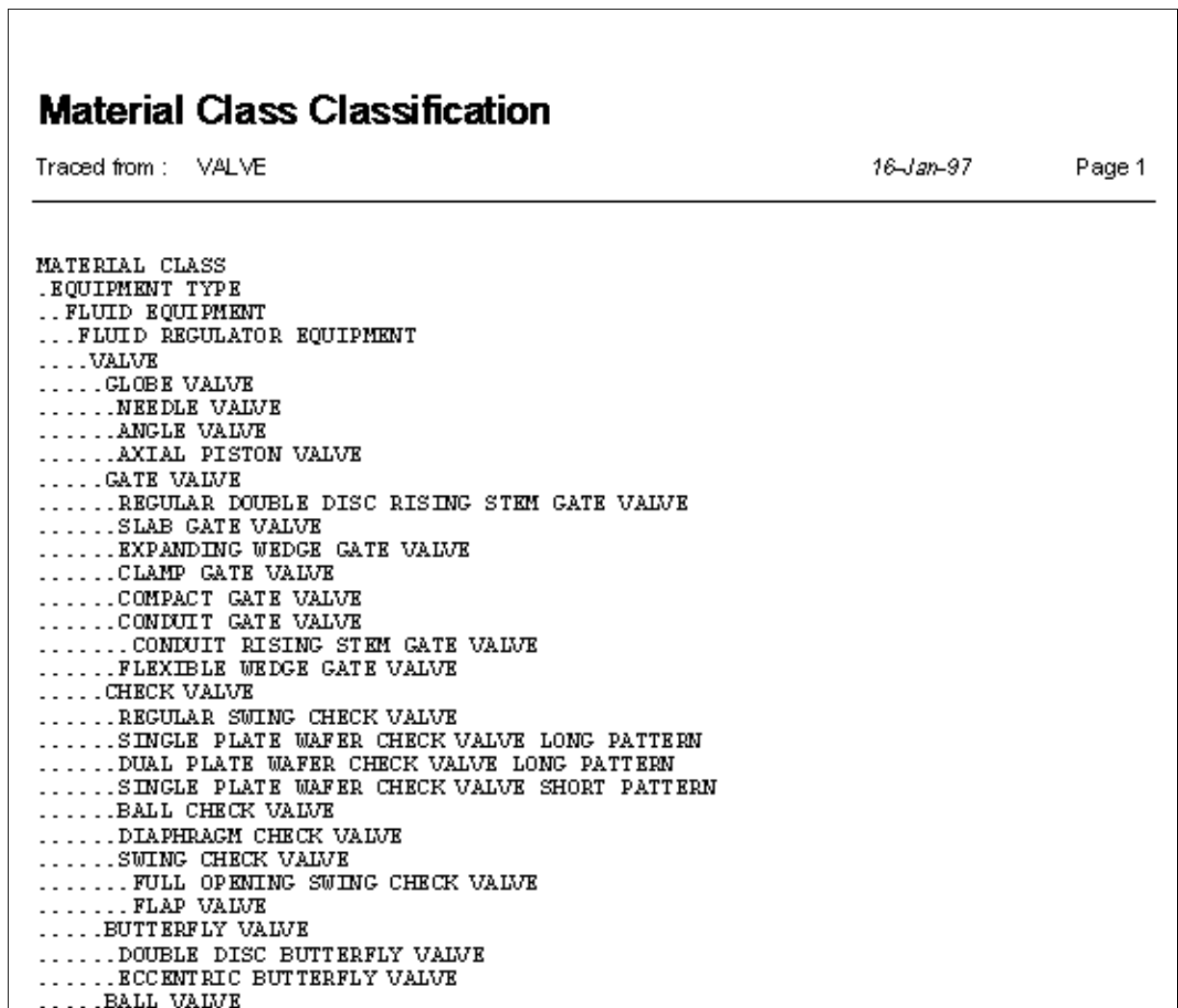


Figure 2-16 Object structure report

2.5 Report; Association

1. Select selection criteria
 - Mandatory (fig.12):
Select Object type / Class type to report (Mandatory choice)
 - Optional (fig.13):
Select Classes either by 'Name', by 'user-id' or by 'last modification date'
 - Press [Select] in order to execute the selection.
2. Select which fields to display in the report
 - 'Label', 'Description', 'Remarks', 'User ID', 'Last Modification date'
3. Select which associations to report :
 - 'Classification', 'Composition', 'Normal Composition', 'Normal Connections'
 - 'Normal properties'
4. Press [Report] button to display/print the report.

Select 'Object' type ; e.g. material class

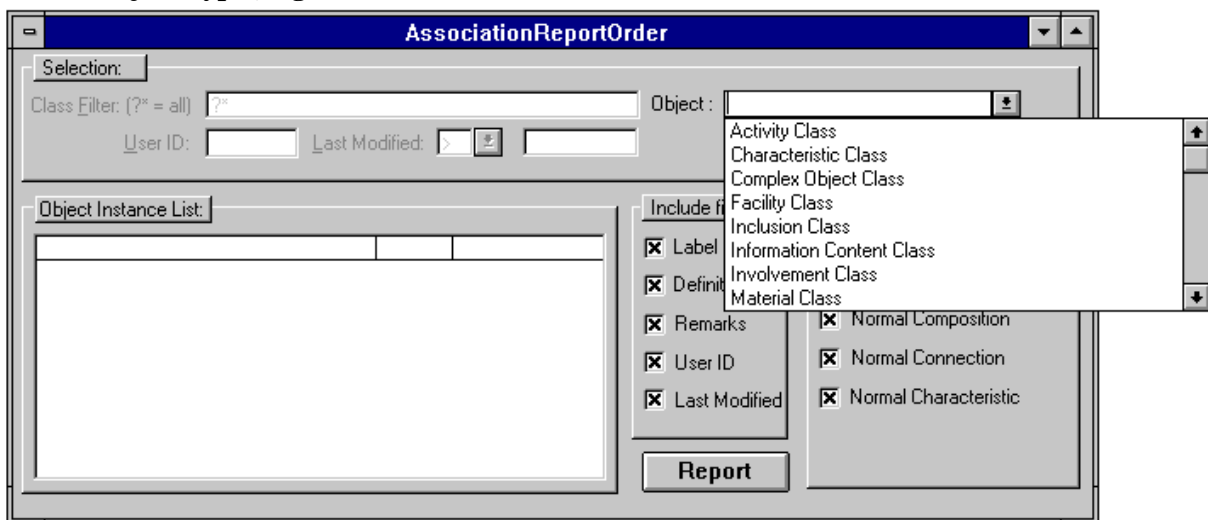


Figure 2-17 Selection criteria for the Association report.

Select Classes,

Sub-set of classes may be specified using the 'Class Filter' field.

e.g. 'V*' in order to list all classes starting with letter 'V'

- ? replace one character
- * replace any number of characters.

Press the **[Select]** button in order to execute your selection/filter.

This will result in the 'Object Instance List' as indicated below.

AssociationReportOrder

Selection:

Class Filter: (?* = all)

User ID: Last Modified: **Select**

Object Instance List:

Object Name	User ID	Last Modified
VALERONITRIL	u82241	14.Nov.1996
VALVE	u82236	30.Apr.1996
VALVE ASSEMBLY	u82237	13.Dec.1996
VALVE BODY	u82237	14.Nov.1996
VALVE BONNET	u82237	23.Nov.1995
VALVE BONNET ASSEMBLY	u82236	12.Nov.1996
VALVE BONNET GASKET	u82237	14.Nov.1996
VALVE BOTTOM FLANGE	u82237	14.Nov.1996
VALVE DESIGN SPECIFICATION	u82237	06.Jun.1996

Include fields:

- ☒ Label
- ☒ Definition
- ☒ Remarks
- ☒ User ID
- ☒ Last Modified

Associations:

- ☒ Classification
- ☒ Normal Composition
- ☒ Normal Connection
- ☒ Normal Characteristic

Report


Figure 2-18 Association report

Include fields and Associations options.

By default all fields and all associations are set to ON. In this example we keep all options on.

The more associations which are set to ON the longer time the report will take to run !
The speed of the report is dependent of available memory and type of PC processor.

RUN THE REPORT

- Press the **[Report]** button in order to run the report of all classes which is included in the list, as a result of the selection criteria.
- You may  'double-click' in any of the classes in order to generate a report for a single class.

Both options will result in a Print-Preview on screen (see next page). This report could then be printed, either the whole document, or only part of it.

Select the Printer icon in order to print the whole report or parts of the report.

Material Class Report

Material Class Report

VALVE

(Last Modified 30.4.96 by: u82236)

Label:

Definition: A device used to control, i.e. permit, obstruct or regulate a Fluid Stream.

Remarks:

Super Classes:

- MATERIAL CLASS
- .EQUIPMENT TYPE
- ..FLUID EQUIPMENT
- ...FLUID REGULATOR EQUIPMENT
-VALVE

Sub Classes:

- VALVE
- .GLOBE VALVE
- ..NEEDLE VALVE
- ..ANGLE VALVE
- ..AXIAL PISTON VALVE
- .GATE VALVE
- ..REGULAR DOUBLE DISC RISING STEM GATE VALVE
- ..SLAB GATE VALVE
- ..EXPANDING WEDGE GATE VALVE
- ..CLAMP GATE VALVE
- ..COMPACT GATE VALVE
- ..CONDUIT GATE VALVE
- ...CONDUIT RISING STEM GATE VALVE
- ..FLEXIBLE WEDGE GATE VALVE
- .CHECK VALVE
- ..REGULAR SWING CHECK VALVE
- ..SINGLE PLATE WAFER CHECK VALVE LONG PATTERN
- ..DUAL PLATE WAFER CHECK VALVE LONG PATTERN
- ..SINGLE PLATE WAFER CHECK VALVE SHORT PATTERN
- .
- .

Normally Part of:

- CONTROL VALVE
- COOLING UNIT
- DRAG VALVE
- FLOAT VALVE
- IGNITION UNIT

Normal Parts: <none>

Normal Connections : ACTUATOR VALVE

Normal Properties:

END TO END DIMENSION	VALVE
DRY WEIGHT	FLUID EQUIPMENT
MAXIMUM DESIGN PRESSURE	FLUID EQUIPMENT
MAXIMUM DESIGN TEMPERATURE	FLUID EQUIPMENT
MAXIMUM OPERATING PRESSURE	FLUID EQUIPMENT
MAXIMUM OPERATING TEMPERATURE	FLUID EQUIPMENT
.....	

2.6 Report; Involvement

This report currently list all defined Involvement instances.

Normal involvement report		
16-Jan-97		
Activity Class	Involvement Class	Class Object
AUTHORISE	AUTHORISEABLE	ACTIVITY CLASS
AUTHORISE	AUTHORISEABLE	CHARACTERISTIC CLASS
AUTHORISE	AUTHORISEABLE	FACILITY CLASS
AUTHORISE	AUTHORISEABLE	INFORMATION CONTENT CLASS
AUTHORISE	AUTHORISEABLE	MATERIAL CLASS
AUTHORISE	PURPOSE	ACTIVITY CLASS
CONTROL AND APPROVE ACTIVITIES	BASIS	CHANGE REQUEST
CONTROL AND APPROVE ACTIVITIES	BASIS	OWNER REQUIREMENTS
CONTROL AND APPROVE ACTIVITIES	BASIS	SITE INFORMATION
CONTROL AND APPROVE ACTIVITIES	BASIS	STATUS
CONTROL AND APPROVE ACTIVITIES	CONTROLLER	BUSINESS DIRECTIVES
CONTROL AND APPROVE ACTIVITIES	CONTROLLER	CODES

Figure 2-19 Involvement report.

2.7 Create comments file for Email attachment.

This option is used to generate a report file of the comments made to any class instance in the library.

The following options are available :

- Include all comments :

This option will make a report of all comments stored in the data base, and set a switch on all reported items to 'Export date'

- Include only comments not sent previously.

This option will make a report of the comments which have not been previously sent, i.e. 'Export date' = Null

- Output filename :

Default filename is C:\PC_EMAIL.TXT

If the file already exist, this will be indicated in read text ' File already exist'

If you do not want to overwrite the existing file, enter a new name.

Press [V] button to accept the options, and start generation of the export file.

Press [X] button to cancel the Export.

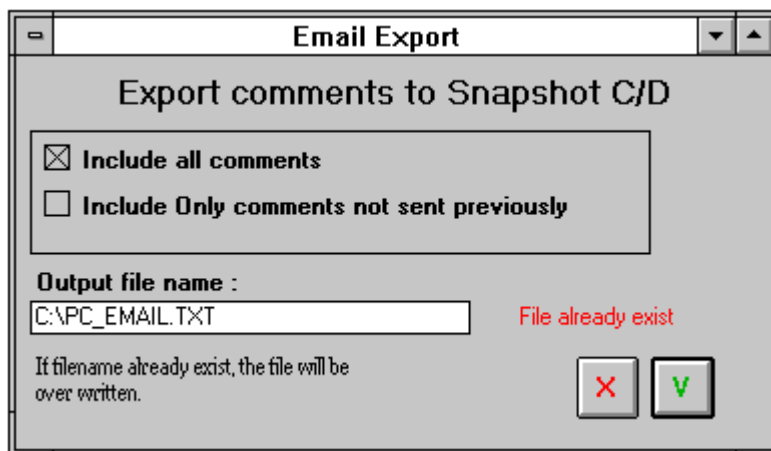


Figure 2-20 Export comments

The Export file, PC_EMAIL.TXT may be sent to the POSC/CAESAR project by email, or a printout of this file may be sent by fax.

